

in one of all the cases treated, although in many it had previously been a prominent symptom.

To the general amelioration in a patient's condition he attributed importance only because in his cases it occurred without resort to those measures—such as rest, food, and air—which might be expected to produce it, temporarily at any rate, in almost any case. The treatment of any case of tuberculosis and its final cure must necessarily take a long time, and he was not prepared to say that all his cases were absolutely cured, but many of them certainly were, and as regarded the rest everything pointed towards a successful termination. This was the more remarkable, because it was not the most favourable cases which he had selected for treatment. The virtue of the serum being, he considered, established by the results of its use in severe cases, it was right now he thought that it should be extensively used in those which were only slightly advanced.

His experience in the use of the serum in surgical tuberculosis was not very extended, but a number of photographs and other records of advanced cases were exhibited, the results of the treatment of which seemed to Professor Marmorek to be distinctly encouraging. As regards the technique of the injections, that which experience had induced him now to adopt was a series of daily doses for four or five days, with an interval of three or four days between, and followed after each two or three series by an interval of a week or a fortnight. In chronic cases the dose should be 5 c.cm., but in the acute ones doses of 20 c.cm. to 30 c.cm. were well borne even by children. The serum as now prepared never gave any unpleasant reaction other than a slight passing and unimportant erythema.²

THE USE OF THE METRIC SYSTEM IN PRESCRIBING.

In response to requests from correspondents we give below a few notes which we hope may be of use to those desirous of familiarizing themselves with the metric system of weights and measures as applied to the writing of prescriptions.

In prescribing by the metric system³ the unit of weight is the gram, which is equal to about 15 gr., and that of volume the cubic centimetre equal to about 17 minims.

The relation of the two systems stated more accurately is:⁴

1 gram (g.)	= 15.432 grains.
1 decigram (dg.)	= 1.5432 "
1 centigram (cg.)	= 0.15432 "
1 milligram (mg.)	= 0.015432 "
1 cubic centimetre (c.cm.)	= 16.9 minims.

The fluid drachm is roughly equivalent to 4 c.cm., and the fluid ounce to 30 c.cm., and the drachm and ounce to 4 g. and 30 g. respectively.

Gram and cubic centimetre signs will alone be necessary in prescriptions, the smaller weights and measures being expressed as decimal fractions; thus 0.1 gram = 1 decigram, 0.01 gram = 1 centigram, 0.001 = 1 milligram, etc.

If we take an ordinary prescription and write the two systems side by side in exactly equivalent quantities, the difficulties involved in the adoption of the metric system are greatly magnified; for example:

R̄ Ferri sulph. gr. ij	= 0.1296 gram.
Quin. sulph. gr. j	= 0.0648 gram.
Ac. sulph. dil. mij	= 0.118 c.cm.
Glycerini ʒj	= 3.552 c.cm.
Aquam ad ʒj	= 28.417 c.cm.

This is the manner in which the opponents of the change frequently support their arguments. Such difficulties would not arise, however, were the new system actually adopted. The doses of pharmacopoeial and other remedies would then be given in grams and cubic centimetres; and instead of having, say, "ferri sulph., dose 1-5 gr.," we should have "ferri sulph., dose 0.05-0.25 g." In the same way the dosage of mixtures would be altered somewhat. Thus simplified the prescription becomes:

R̄ Ferri sulph. gr. ij	= 0.1 gram.
Quin. sulph. gr. j	= 0.05 gram.
Ac. sulph. dil. mij	= 0.1 c.cm.
Glycerini ʒj	= 4 c.cm.
Aquam ad ʒj	= ad 20 c.cm.

² For the experiences of Paris physicians with this serum see BRITISH MEDICAL JOURNAL, December 10th, 1903, p. 1621.

³ It would be more logical to use the millimetre, which is nearly equivalent to the cubic centimetre, but it is not customary.

⁴ Other equivalents were published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of March 19th, p. 42.

The most convenient dose for mixtures would probably be 20 c.cm. It is somewhat less than a fluid ounce, but has the advantage of being divisible by 4 to give a whole number, which would not be the case with 30 c.cm. (more nearly equivalent to the fluid ounce).

Too great concentration in mixtures is a fruitful source of incompatibility, and 20 c.cm. would most generally be ordered; when necessary, doses of 10 c.cm. or 5 c.cm. could be prescribed. Such doses do not accord with the spoons in common use, but the introduction of the new system would be a fitting opportunity to break with this inaccurate method of measuring. The most convenient bottles to use would be those with a capacity of 200 c.cm., 100 c.cm., or 50 c.cm., and during the transition stages 8 oz., 4 oz., and 2 oz. bottles could be used to contain these quantities. In dispensing ten doses all the calculation necessary would be a shifting of each decimal point one place to the right. Bearing in mind what has already been said the following prescriptions, with approximate equivalents in the metric system, may be written:

R̄ Tinct. nuc. vom. miv	= 0.25 c.cm.
Ac. hydrochlor. dil. mx	= 0.5 c.cm.
Aquam ad ʒj	= ad 20 c.cm.
Mitte ʒviii	Mitte 200 c.cm.
R̄ Magnes. sulph. ʒj	= 4 grams.
" carb. gr. x	= 0.6 gram.
Aq. menth. pip. ad ʒss	= ad 10 c.cm.
Mitte ʒiv	Mitte 100 c.cm.
R̄ Oxymel. scillae mxxiv	= 1.5 c.cm.
Tinct. camph. co. mxij	= 0.75 c.cm.
Vin. ipecac. mvj	= 0.4 c.cm.
Syrupum ad ʒj	= ad 5 c.cm.
Mitte ʒij	Mitte 50 c.cm.

Lotions, liniments, and all liquid preparations would be dealt with in a similar manner. In the same way pills 1 to 5 gr. would become 0.06 to 0.3 g. (6 to 30 cg.) in size. The dose of potent extracts, instead of $\frac{1}{4}$ to 1 gr., would become, say, 0.015 to 0.06 g. (15 to 60 mg.), thus:

R̄ Podoph. res. gr. ʒ	= 0.005 gram.
Quin. sulph. gr. j	= 0.06 gram.
Ext. belladon. gr. ʒ	= 0.015 gram.
" aloes gr. j	= 0.06 gram.
Mitte xii, vel. xxiv	Mitte x, vel. xx.

It will be gathered from what has been said that it is hopeless to endeavour to write equivalent formulae in the two systems, and the coming change must be a radical one. No doubt pharmacopoeial formulae will be modified still further in the direction of simplicity of dosage. Those who really wish to gain some practical idea of the new system would be well advised to purchase a set of metric weights and measures (which can be obtained at a trifling cost), and by weighing and measuring a few substances they will soon become accustomed to thinking in metric quantities.

PREVENTION OF CONSUMPTION.

TUBERCULOUS CHILDREN IN NEW YORK.

At the last meeting of the Association for Improving the Condition of the Poor a sum of £3,000 was appropriated for the maintenance at the seaside of 50 children suffering from non-pulmonary forms of tuberculosis. According to Dr. Herman Biggs, there are in the New York Tenements alone from 3,000 to 4,000 children under 15 years of age suffering from tuberculosis of the bones, joints, and lymph glands. Tuberculosis of the lungs affects but a relatively small number of children under 15.

GERMANY.

The Imperial Statistical Bureau, Berlin, has recently published the results of a statistical inquiry by Dr. Mayet as to the causes of death in the German Empire during the twenty-five years 1877-1901. The statistics relating to tuberculosis show in a striking manner the decrease of the disease during that period. The following figures, based on the returns for towns with a population of more than 15,000, show the death-rate from tuberculosis per 10,000 inhabitants:

1887-1888	...	...	...	...	...	...	357.7
1882-1886	...	...	...	...	...	...	346.2
1887-1891	...	...	...	...	...	...	304.0
1892-1896	...	...	...	...	...	...	255.5
1897-1901	...	...	...	...	...	...	218.7

BOHEMIA.

A Society for the Cure of Consumptives in the various countries of the Austrian Empire has been formed in Vienna. It is thought that to make the war against tuberculosis